RESTAURANT SERVICE SYSTEM
[Inshokuten Sabisu Shisutemu]

Tadahiko Kawai

Country	:	Japan
Document No.	:	4-169966
Document type	:	Kokai
Language	:	Japanese
Inventor	:	Tadahiko Kawai
Applicant	:	Mitsubishi Electric Corporation
IPC	:	G 06 F 15/21
Application date	:	November 2, 1990
Publication date	:	June 17, 1992
Foreign Language Title	:	Inshokuten Sabisu Shisutemu
English Title	:	RESTAURANT SERVICE SYSTEM

1.   <u>Title of the Invention</u>:   RESTAURANT SERVICE SYSTEM

2.   <u>Claim</u>

A restaurant service system characterized by the fact that it is equipped with a portable order input terminal unit that inputs a menu ordered by a customer and transmits an order menu information to a menu of which cooking is completed, a kitchen terminal unit that displays the above-mentioned menu in a cooking site and transmits a cooking completion information, a service control terminal unit that monitors a cooking state based on the above-mentioned order menu information, instructs services for the above-mentioned customer based on the above-mentioned order menu information, and issues a bill slip as needed, and a POS terminal unit that generally controls the above-mentioned portable order input terminal unit, the above-mentioned kitchen terminal unit, and the above-mentioned service control terminal unit and processes a bill at a time of payment after a meal.

3.   <u>Detailed explanation of the invention</u>

(Industrial application field)

---

*Numbers in the margin indicate pagination in the foreign text.

The present invention pertains to a restaurant service system that makes business services efficient in a restaurant that transmits orders of customers to a cooking site and pays a bill after a meal.

(Prior art)

In a conventional restaurant service system, a menu information input from a portable order input terminal unit has been output as it is as a bill slip.

Also, a service state has been processed by including a check in the bill slip.

The conventional restaurant service system manages the service state by using a bill slip output by printing, however in particular, in a crowded case, a lots of bill slips are cumulated, so that much efforts have been required to search for the corresponding bill slip. Also, during the service, it has been difficult to confirm whether or not a designated menu to be serviced after a meal is serviced without remaining.

(Problems to be solved by the invention)

In the above-mentioned conventional restaurant service system, since a cooking state or a menu after a meal cannot be detected in the customer seat floor, the management of bill slips was complicated, errors were frequently generated, and service/2 qualities were lowered.

The present invention solves the above-mentioned problems, and its purpose is to provide a restaurant service system that can generally control both a cooking state of a kitchen and a

3

service state, can output a bill slip as needed, which has been instantly printed and output, and can realize a service without confusion.

(Means to solve the problems)

The restaurant service system of the present invention is equipped with the following means.

(1) A portable order input terminal unit that inputs a menu ordered by a customer and transmits an order menu information

(2) A kitchen terminal unit that displays the above-mentioned menu in a cooking site and transmits a cooking completion information to a menu of which cooking is completed

(3) A service control terminal unit that monitors a cooking state based on the above-mentioned order menu information, instructs services for the above-mentioned customer based on the above-mentioned order menu information, and issues a bill slip as needed

(4) A POS terminal unit that generally controls the above-mentioned portable order input terminal unit, the above-mentioned kitchen terminal unit, and the above-mentioned service control terminal unit and processes a bill at a time of payment after a meal

(Operation)

In the present invention, using the portable order input terminal unit, a menu ordered by a customer is input, and an order menu information is transmitted.

Also, using the kitchen terminal unit, the above-mentioned

4

menu is displayed in a cooking site, and a cooking completion information is transmitted to a menu of which cooking is completed.

Then, using the service control terminal unit, a cooking state is monitored based on the above-mentioned order menu information, and services for the above-mentioned customer are instructed based on the above-mentioned order menu information. If necessary, a bill slip is issued.

Furthermore, using the POS terminal unit, the above-mentioned portable order input terminal unit, the above-mentioned kitchen terminal unit, and the above-mentioned service control terminal unit are generally controlled, and a bill is processed at a time of payment after a meal.

(Application example)

The constitution of an application example of the present invention is explained referring to Figures 1, 2, and 3.

Figure 1 is a block diagram showing an application example of the present invention. Figure 2 is an oblique view showing details of a service control terminal unit of an application example of the present invention. Figure 3 is a front view showing the layout of a keyboard of the above-mentioned service control terminal unit.

In Figure 1, (1) is a POS terminal unit that is installed in the vicinity of the entrance of a store, generally controls the service system, and has a bill function. (2) is a wireless portable order input terminal unit that inputs an order menu of a

customer. (3) is an order reception terminal unit that receives data being sent from the portable order input terminal unit (2).

(4) is a service control terminal unit that is installed at part of a customer seat floor and monitors a slip issue and a service state. (5) is a bill slip printer connected to the service control terminal unit (4). (6) is a kitchen terminal unit that is installed in a cooking site and displays the menu input by the portable order input terminal unit (2).

In Figure 2, (7) is a main body of the service control terminal unit (4), (8) is a power switch, (9) is a color display, (10) is a keyboard for input attached to the main body (7), and (5) is an actual body of a bill slip printer being connected by a wire cable (11). As the bill slip printer (5), several units can be connected, and the output of a slip is controlled by the main body (7) of the service control terminal unit (4).

In Figure 3, (12) is a ten key for inputting numerical values, (13) is an input key, (14) is a cursor key being used in moving a cursor on the screen of the color display (9), and (15) is a function key.

Next, the operation of the above-mentioned application example is explained referring to Figures 4-7.

Figure 4 is a referential diagram showing an information flow of an application example of the present invention. Figure 5 is a flow chart showing the operation of an application example of the present invention. Figures 6 and 7 are display screen diagrams showing the operation of an application example of the

6

present invention.

As shown in Figure 4, a customer order menu information (16) picked up by a waitress is input from the portable order input terminal unit (2), passed through the order reception terminal unit (3), and sent to the POS terminal unit (1).

The POS terminal unit (1) relays the information to the service control terminal unit (4) and the kitchen terminal unit (6).

At that time, the order menu is displayed on the kitchen terminal unit (6), and an instruction is given to a cook. For the menu of which cooking is completed, the completion is input by the kitchen terminal unit (6), and the menu is erased from the display. At the same time, the cooking completion information (17) is transmitted to the service control terminal unit (4).

The service control terminal unit (4) implements the following processing based on the order menu information (16) and the cooking completion information (17).

If "slip monitor" of the function key (15) of the keyboard (10) is input, a table No. is input by the ten key (12) at a step (30) of Figure 5.

At a step (31), the contents of the slip of the corresponding table are displayed on the color display (9). For example, as shown in Figure 6, the screen of "slip monitor" is displayed.

In Figure 6, (18) is a table No., (19) is a slip No., (20) is the number of person, (21) is a store arrival time, (22) is

7

the number of row line, (23) is a menu name, (24) is a quantity, (25) is an asterisk mark showing the completion of cooking in a kitchen, (26) is a display showing a menu after a meal, (27) is an amount of payment, and (28) shows the existence of continuation in the following page.

At a step (32), whether or not the slip is printed is decided, and if NO, the flow returns to the step (30). If YES, the flow proceeds to a step (52).

If "simultaneous slip display" of the function key (15) of the keyboard (10) is input, all the current slips are displayed on the color display (9) at a step (40) of Figure 5. For example, as shown in Figure 7, a screen of "simultaneous slip display" is displayed. The screen simultaneously displays the table No. and the slip No. of a customer who currently takes a meal.

At a step (41), whether or not the contents of each slip are checked is decided, and if YES, the flow proceeds to the step (31). If NO, the flow proceeds to the next step (42). For example, if the cursor is moved to the corresponding table No. and the input key (13) is pressed, the flow proceeds to the screen of Figure 6.

At the step (42), whether or not the slip is printed is decided, and if NO, the flow returns to the step (40). If YES, the flow proceeds to the step (52).

If "slip issue" of the function key (15) of the keyboard (10) is input, at a step (50) of Figure 5, whether or not cooking

8

is completed for all the order menus is decided. If YES, the slip is automatically printed by the bill slip printer (5) at the next step (52), and if NO, the flow proceeds to a step (51).

At the step (51), the table No. is input, and the flow proceeds to the step (52). Then, the corresponding slip is printed.

It is automatically issued when the menu corresponding to the slip is completed in the cooking site, and if necessary, an optional slip is issued at any time.

As mentioned above, the flow can proceed to the processing of "slip issue" from the screen of "slip monitor" and "simultaneous slip display." For example, after the corresponding table No. is designated by the cursor, the function key (15) of "slip issue" may be input.

The information in the service control terminal unit (4) is erased by a bill establishment by the POS terminal unit (1) at a time of accounting by the customer.

In this application example of the present invention, as mentioned above, the order menu information, the cooking completion information, and the service information are generally controlled at a unit of bill slip for a customer arriving at a store and displayed on the display by the key operation, so that the current order state, cooking state, and service state can be precisely recognized at a glance. The cooking state and the menu /4 after a meal can be detected even from the customer seat floor, and the slip can be issued at any time, unlike the conventional

order reception. Furthermore, the slips can be very simply controlled. Thus, mistakes are extremely reduced, and service qualities can be improved.

(Effects of the invention)

As explained above, the present invention is equipped with a portable order input terminal unit that inputs a menu ordered by a customer and transmits an order menu information to a menu of which cooking is completed, a kitchen terminal unit that displays the above-mentioned menu in a cooking site and transmits a cooking completion information, a service control terminal unit that monitors a cooking state based on the above-mentioned order menu information, instructs services for the above-mentioned customer based on the above-mentioned order menu information, and issues a bill slip as needed, and a POS terminal unit that generally controls the above-mentioned portable order input terminal unit, the above-mentioned kitchen terminal unit, and the above-mentioned service control terminal unit and processes a bill at a time of payment after a meal. Thus, both a cooking state of a kitchen and a service state can be simultaneously controlled, and a bill slip can be issued as needed, unlike the conventional system that has instantly printed and output bill slips. Thereby, a service without confusion can be realized.

4. <u>Brief description of the figures</u>

Figure 1 is a block diagram showing an application example of the present invention. Figure 2 is an oblique view showing

details of a service control terminal unit of an application example of the present invention. Figure 3 is a front view showing a keyboard of the above-mentioned service control terminal unit. Figure 4 is a referential diagram showing an information flow of an application example of the present invention. Figure 5 is a flow chart showing the operation of an application example of the present invention. Figures 6 and 7 are display screen diagrams showing the operation of an application example of the present invention.

In the figures,

(1)   POS terminal unit

(2)   Portable order input terminal unit

(3)   Order reception terminal unit

(4)   Service control terminal unit

(5)   Bill slip printer

(6)   Kitchen terminal unit

Also, in each figure, the same symbol shows the same or corresponding part.

Figure 1:

1   POS terminal unit

2   Portable order input terminal unit

3   Order reception terminal unit

4   Service control terminal unit

5   Bill slip printer

6   Kitchen terminal unit

Figure 3:

1.   Slip monitor

2. Simultaneous slip display

3. Slip issue

4. Clear

Figure 4:

1   POS terminal unit

4   Service control terminal unit

5   Bill slip printer

6   Kitchen terminal unit

16 Order menu information

17 Cooking completion information

Figure 5:

A.   Slip monitor

B.   Simultaneous slip display

C.   Slip issue

D.   End

30   Input of table No.

31   Display of the contents of a slip of the corresponding table

40   Display of all the current slips

41   Checking of contents ?

42   Printing of slip ?

50   Finishing of all cooking ?

51   Input of table No.

52   Printing of the corresponding slip

Figure 6:

1. Slip monitor

2. Table 5

3. Table 12

4. For two persons

5. For six persons

6. 1. Curry beef

   2. Ice coffee

   3. Doria [transliteration]

7. 1. Heated spaghetti

   2. Shrimp [illegible]

   3. Boiled rice

   4. Green salad

   5. Chashumen [transliteration]

   6. Lemon tea

   7. Coffee

   8. Cream soda

8. Amount: 1,650 yen

9. Continued

10. Amount: 3,825 yen

Figure 7:

1.   Simultaneous slip display

2.   Table No.

3.   Slip No.

4.   Table No.

5.   Slip No.